

Remarks

The examiner requested restriction under 35 U.S.C. §121 to:

Group I, drawn to a classifier and including claims 1-7, classified in Class 209, subclass 686, or

Group II, drawn to a system and including claims 8-12, classified in Class 117, subclass 7.

The applicants affirm the provisional election of group I. The applicants make this election without traverse. Claim 8 is amended to facilitate rejoinder under MPEP §821.04. Claims 9-12 are dependent on claim 8.

The examiner objected to the drawings under 37 C.F.R. 1.83(a) arguing that the bucket and belt conveyor in claim 6 must be shown or the features canceled from the claims. Claim 6 has been amended as the examiner suggested, therefore the applicants respectfully request withdrawal of the objection to the drawings.

The examiner rejected claims 1 and 3-7 under 35 U.S.C. §102(b) because U.S. Patent 882,955 to Neufeld discloses a classifier comprising a cylinder having a circumferential edge. The examiner further argues that Neufeld discloses indents arrayed in increasing size from a first end of the cylinder to a second end of the cylinder.

One skilled in the art would recognize that the rotary indent classifier of this invention differs from the grain separator of Neufeld. Figure 1 of Neufeld and Figure 1a of the instant application illustrate the differences. The grain separator of Neufeld does not have indents in the circumferential edge of the cylinder, instead the cylinder of Neufeld has cells or pits provided on its inner face (p. 2, lines 1-5), *i.e.*, cells that protrude outward from inside the cylinder. Grain is fed into the cylinder (p. 2, lines 64-69). The grain separator of Neufeld is not used for processing silicon, and the cylinder is not made of material that imparts no or low surface contamination to silicon. (Neufeld discloses that the cylinder is preferably constructed of sheet metal, p. 2, line 1.) Because of these differences, this invention is novel over Neufeld, and the applicants request that the rejection under 35 U.S.C. §102(b) be withdrawn and the claims allowed to issue.

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The examiner rejected claim 2 under 35 U.S.C. §103(a) as being unpatentable over Neufeld in view of 'what is well known in the art' because the examiner argues that Neufeld discloses all that is claimed except for the vibratory conveyor, however, a vibratory conveyor is well known in the sorting arts. The examiner concludes it would have been obvious at the time the invention was made to modify the invention of Neufeld as is well known in the art.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure MPEP §2143.

Even where the combination of the references taught every element of the claimed invention, however without a motivation to combine or modify, a rejection based on a *prima facie* case of obvious was held improper MPEP §2143.01. The level of skill in the art cannot be relied upon to provide the suggestion to combine or modify references MPEP §2143.01. The mere fact that references can be combined or modified does not render the resultant combination or modification obvious unless the prior art also suggests the desirability of the combination MPEP §2143.01. A statement that modifications of the prior art to meet the claimed invention would have been " 'well within the ordinary skill of the art at the time the claimed invention was made' " because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine or modify the teachings of the references MPEP §2143.01.

Prior art must be considered in its entirety, including disclosures that teach away from the claims MPEP §2145 (X)(D), MPEP §2143.01. The proposed modification cannot render the prior art

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unsatisfactory for its intended purpose or change the principle of operation of a reference MPEP §2145 (X)(D), MPEP §2143.01.

A prior art reference that “teaches away” from the claimed invention is a significant factor to be considered in determining obviousness MPEP §2145 (X)(D). It is improper to combine references where the references teach away from their combination MPEP §2145 (X)(D).

Neufeld discloses a grain separator. Nothing in the disclosure of Neufeld teaches or suggests the grain separator can be used for processing silicon. Nothing in the disclosure of Neufeld teaches or suggests modifying the cylinder to replace the cells with indents according to this invention. Furthermore, Neufeld discloses that the cylinder is preferably constructed of sheet metal (p. 2, line 1). One skilled in the art would recognize that a sheet metal cylinder that contacts grain is not suitable for processing silicon because components that contact the silicon impart no or low surface contamination to the silicon, and sheet metal would not be suitable. Furthermore, nothing in the disclosure of Neufeld teaches or suggests adding a conveyor running longitudinally adjacent the cylinder. Therefore, one skilled in the art would not be motivated to modify the grain separator of Neufeld to arrive at the classifier of this invention.

The prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success MPEP §2143.02. At least some degree of predictability is required MPEP §2143.02. Evidence showing there was no reasonable expectation of success may support a conclusion of nonobviousness MPEP §2143.02. Whether an art is predictable or whether the proposed modification or combination of the prior art has a reasonable expectation of success is determined at the time the invention was made MPEP §2143.02.

One skilled in the art would not have a reasonable expectation of success to arrive at this invention based on the disclosure of Neufeld. Nothing in the disclosure of Neufeld teaches or suggests modifying the grain separator of Neufeld. Neufeld discloses that the cylinder is

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preferably constructed of sheet metal (p. 2, line 1). One skilled in the art would recognize that a sheet metal cylinder that contacts grain is not suitable for processing silicon because components that contact the silicon impart no or low surface contamination to the silicon, and sheet metal would not be suitable. Therefore, one skilled in the art would not have a reasonable expectation of success to arrive at this invention based on the disclosure of Neufeld.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art MPEP §2143.03. All words in a claim must be considered in judging the patentability of that claim against the prior art MPEP §2143.03.

Neufeld lacks the conveyor running longitudinally adjacent the cylinder, the configuration and materials of construction for processing silicon, and the indents in the circumferential edge of the cylinder of this invention for the reasons discussed above. Therefore, the third criterion for establishing a *prima facie* case of obviousness has not been met.

This reply is being submitted within the period for response to the outstanding office action. Although the applicants believe in good faith that no extensions of time are needed, the applicants hereby petition for any necessary extensions of time. You are authorized to charge deposit account 04-1520 for any fees necessary to maintain the pendency of this application. You are authorized to make any additional copies of this sheet needed to accomplish the purposes provided for herein and to charge any fee for such copies to deposit account 04-1520.

Respectfully Submitted,
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